

What is claimed:

1. A data structure for exchanging billing
information between a first party and a second party
5 comprising:

a transmission information section;

a record section containing billing information on one
or more events, the record section including a rate element
for defining a chargeable unit.

10 2. The data structure of claim 1 further comprising
an audit section that includes an account of the total
number of records in a data structure and an account of the
total charges in the total number of records.

15 3. The data structure of claim 1 wherein the
identification field includes a sender identification, a
receiver identification and a data structure identification
number.

20 4. The data structure of claim 1 further comprising
a file name associated with the data structure, the file
name including the senders identification, a receiver
identification and a date identification.

25 5. The data structure of claim 3 wherein the sender
identification is stored as a business resource identifier
comprising a country code section, an entity code section
and a market ID section.

30 6. The data structure of claim 3 wherein the
receiver identification is stored as a business resource

identifier comprising a country code section, an entity code section and a market ID section.

7. The data structure of claim 4 where the date
5 identification includes a year field to denote the year the data structure was generated and a day field to denote the day of the year the data structure was generated.

8. The data structure of claim 4 wherein the
10 filename further comprises a test/charge indicator that denotes if the data structure is a test file to test a billing system or a charge file that carries billing data.

9. The data structure of claim 4 wherein the
15 filename further comprises a type indicator that denotes if the data structure is an envelope or a message.

10. The data structure of claim 1 wherein the
20 transmission information section further comprises an identification number element that includes a year indicator denoting the year the data structure was generated and a day indicator denoting the day of the year the data structure was generated.

25 11. The data structure of claim 1 wherein the transmission information section further comprises a return field for indicating the reason an envelope is returned.

12. The data structure of claim 1 wherein the record
30 section further comprises a record heading section that provides information common to all the events in the record section.

13. The data structure of claim 12 wherein the record heading section further comprises a total event attribute for listing the total number of events in the record section.

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14. The data structure of claim 12 wherein the record heading section further comprises a reserve field that can be customized by the first party and the second party.

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15. The data structure of claim 12 wherein the record heading section further comprises a record return detail element that provides information regarding data structure that are rejected by a validation process.

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16. The data structure of claim 1 wherein the record section further comprises an end user section to identify a party who initiated the event or a party for whom the event was initiated.

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17. The data structure of claim 1 wherein the record section further comprises one or more event information subsections that provide billing information regarding each event in the record section.

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18. The data structure of claim 17 wherein the event information section further comprises an event type attribute to denote the type of service used.

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19. The data structure of claim 17 wherein the event information section further comprises a service information subsection.

20. The data structure of claim 19 wherein the service information section further comprises a quality of service element that denotes the quality of services for the event.

21. The data structure of claim 19 wherein the service information section further comprises an administrative element that contains information regarding the event usage.

22. The data structure of claim 19 wherein the rate element is part of a rate detail section.

23. The data structure of claim 22 wherein the rate detail section further comprises a numerator attribute for providing the currency amount per the chargeable unit as stored in the rate element attribute.

24. The data structure of claim 22 wherein the rate detail section further comprises a denominator attribute for providing the chargeable unit as stored in the rate element attribute for a given rate.

25. The data structure of claim 1 further comprising one or more record sections associated with each transmission information section, each record section containing billing information on one or more events.

26. A method for processing billing information between a service provider and a bill processing entity comprising:

generating a data structure at the service provider,
5 the data structure including an identification field and one or more billing records;

sending the data structure to the bill processing entity;

10 verifying the identification field of the data structure at the bill processing entity;

verifying the format of the data structure at the bill processing entity;

returning the data structure to the service provider if the steps of verifying fails; and

15 processing the billing records of the data structures that pass the verification steps.

27. The method of claim 26 wherein the step of verifying the format further comprises verifying that the
20 data structure and billing records are properly formatted.

28. The method of claim 27 wherein the step of verifying the identification field further comprises verifying an audit information field for proper values.
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29. The method of claim 26 wherein the step of sending the data structure further comprises sending the data structure over an Internet connection.

30. The method of claim 26 wherein the step of sending the data structure further comprises sending the data structure over a direct wired connection.
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31. The method of claim 26 wherein the step of sending the data structure further comprises sending the data structure over a wireless connection.

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32. The method of claim 26 wherein the step of sending the data structure further comprises sending the data structure on a removable storage medium.

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33. The method of claim 26 wherein the step of returning the data structure comprises returning the complete data structure with all billing records if the step of verifying the format fails.

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34. The method of claim 26 wherein the step of returning the data structure comprises returning only records that fail the step of verifying the identification field.

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35. The method of claim 26 wherein the step of processing the billing records comprises noting incoming billing records as an accounts payable and reconciling the accounts payable against accounts receivables.

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36. The method of claim 35 wherein the step of processing the billing records further comprises reconciling all accounts billable and accounts receivable at the end of a period.

37. A method for processing billing information at a bill processing entity comprising:

receiving a billing data structure including one or more billing records having billing information at the bill processing entity, the billing data structure including a rate element attribute that defines a chargeable unit;

performing a verification process on the billing data structure;

rejecting all or part of the billing data structure if it fails the step of performing a verification process; and

processing the billing data structure at the bill processing entity if the data structure passes the verification steps.

38. The method of claim 37 wherein the step of performing a verification process further comprises verifying that the billing data structure is properly formatted.

39. The method of claim 38 wherein the step of performing a verification process further comprises verifying an audit information field for proper values.

40. The method of claim 37 wherein the step of receiving a billing data structure further comprises receiving the data structure over an Internet connection.

41. The method of claim 37 wherein the step of receiving a billing data structure further comprises receiving the data structure over a direct wired connection.

42. The method of claim 37 wherein the step of receiving a billing data structure further comprises receiving the data structure over a wireless connection.

5 43. The method of claim 37 wherein the step of receiving a billing data structure further comprises receiving the data structure on a removable storage medium.

10 44. The method of claim 37 wherein the step of rejecting the billing data structure comprises rejecting the complete data structure if identification information in an identification section are not verified.

15 45. The method of claim 37 wherein the step of rejecting all or part of the billing data structure comprises rejecting only billing records if the billing records fail a verification process.

20 46. The method of claim 37 wherein the step of processing the billing records comprises noting incoming billing records as an accounts payable and reconciling the accounts payables against accounts receivables.

25 47. The method of claim 46 wherein the step of processing the billing records further comprises reconciling all accounts billable and accounts receivable at the end of a period.

48. A system for processing billing information comprising:

a billing computer operable to generate a billing data structure having at least one billing record for at least one billing event, the billing data structure including a rate element attribute that defines a chargeable unit; and

a bill processing computer coupled to the billing computer, the bill processing computer comprising:

a verification engine operable to perform a validation process on the billing data structure;

a return engine operable to process the billing data structure which fail the verification process; and

a process engine coupled to the verification engine to process the billing records that pass the verification process.

49. The system of Claim 48 wherein the billing data structure is an original billing envelope comprising one or more billing records.

50. The system of claim 48 wherein the billing data structure is a billing message having one billing record.

51. The system of claim 49 wherein the return engine is further operable to return the entire original billing envelope as a complete return envelope to the provider computer if the original billing envelope fails an identification section validation.

52. The system of claim 49 wherein the return engine is further operable to return a return envelope with all billing records that fail a validation process.

53. The system of claim 50 wherein the return engine is operable to return messages which fail the validation process.

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54. The system of claim 50 wherein the billing computer and the bill processing computer are coupled via an Internet connection.

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55. The system of claim 50 wherein the billing computer and the bill processing computer are coupled via a direct wired connection.

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56. The system of claim 50 wherein the billing computer and the bill processing computer are coupled via wireless connection.

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57. The system of claim 50 wherein the billing computer and the bill processing computer are coupled via a manual connection comprising the transfer of a storage medium containing the billing structure.

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58. The system of claim 48 wherein the billing data structure further comprising an audit section that includes an account of the total number of records in a data structure and an account of the total charges in the total number of records.

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59. The system of claim 48 wherein the billing data structure further comprising an identification field comprising a sender identification, a receiver identification and a data structure identification number.

60. The system of claim 48 wherein the billing data structure further comprises a file name associated with the billing data structure, the file name including the senders
5 identification, a receiver identification and a date identification.

61. The system of claim 59 wherein the sender identification is stored as a business resource identifier
10 comprising a country code section, an entity code section and a market ID section.

62. The system of claim 59 wherein the receiver identification is stored as a business resource identifier
15 comprising a country code section, an entity code section and a market ID section.

63. The system of claim 60 where the date identification includes a year field to denote the year the
20 data structure was generated and a day field to denote the day of the year the data structure was generated.

64. The system of claim 60 wherein the filename further comprises a test/charge indicator that denotes if
25 the data structure is a test file to test a billing system or a charge file that carries billing data.

65. The system of claim 60 wherein the filename further comprises a type indicator that denotes if the data
30 structure is an envelope or a message.

66. The system of claim 59 wherein the transmission information section further comprises an identification number element that includes a year indicator denoting the year the data structure was generated and a day indicator denoting the day of the year the date structure was generated.

67. The system of claim 59 wherein the transmission information section further comprises a return field for indicating the reason an envelope is returned.

68. The system of claim 48 wherein the billing data structure further comprises a record heading section that provides information common to all the events in the record section.

69. The system of claim 68 wherein the record heading section further comprises a total event attribute for listing the total number of events in the record section.

70. The system of claim 68 wherein the record heading section further comprises a reserve field that can be customized.

71. The system of claim 68 wherein the record heading section further comprises a record return detail element that provides information regarding data structure that are rejected by the verification engine.

72. The system of claim 48 wherein the billing data structure further comprises an end user section to identify

a party who initiates the event or a party for whom the event was initiated.

73. The system of claim 48 wherein the billing data structure further comprises one or more event information subsections that provide billing information regarding each event in the record section.

74. The system of claim 73 wherein the event information section further comprises an event type attribute to denote the type of service used.

75. The system of claim 73 wherein the event information section further comprises a service information subsection.

76. The system of claim 75 wherein the service information section further comprises a quality of service element denotes the quality of services for the event.

77. The system of claim 75 wherein the service information section further comprises an administrative element that contains information regarding the event usage.

78. The system of claim 75 wherein the rate element is part of a rate detail section.

79. The system of claim 78 wherein the rate detail element further comprises a numerator attribute for providing the currency amount per the chargeable unit as stored in the rate element attribute.

80. The system of claim 78 wherein the rate detail
element further comprises a denominator attribute for
providing the chargeable units as stored in the rate
5 element attribute for a given rate.

81. The system of claim 48 wherein the billing data
structure further comprising an identification field
associated with one or more billing records.

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82. A settlement method between a first provider and a second provider the method comprising:

generating one or more first provider billing data structure at the first provider based on services provided for the second provider, the billing data structure including a rate element attribute that defines a chargeable unit;

storing an account of the total charges and total taxes from the one or more first providers data structures as an accounts receivable for the first provider;

sending the one or more billing data structures to the second provider;

receiving one or more second provider billing data structures based on services provided for the first provider;

validating the one or more second provider billing data structures;

storing an account of the total charges and total taxes from the one or more second providers data structure as an accounts payable; and

reconciling the accounts payables and accounts receivables at the end of a period.

83. The method of claim 82 further comprising generating invoices or reports regarding the accounts payables and accounts receivable.

84. The method of claim 82 further comprising settling the accounts payable and receivable.

85. The method of claim 82 wherein the step of validating further comprising performing an audit check using an audit field of the billing data structure.

5 86. The method of claim 82 wherein the step of generating a billing data structure further comprises generating an envelope containing one or more billing records.

10 87. The method of claim 82 wherein the step of generating a billing data structure further comprises generating a message containing one billing record.

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88. A program product comprising:

a computer readable medium having computer readable code means embodied therein for storing a billing data structure, the billing data structure comprising;

5 computer readable code means for storing an identification information;

computer readable code means for storing billing information in one or more records containing one or more billing events, the billing information including a rate
10 element attribute for defining the unit of a rate the service is to be charged.

89. The product of claim 88 further comprising computer readable code for storing an audit section that
15 includes an account of the total number of records in a data structure and an account of the total charges in the total number of records.

90. The product of claim 88 wherein the
20 identification information includes a sender identification, a receiver identification and a data structure identification number.

91. The product of claim 88 further comprising
25 computer readable code for storing a file name associated with the billing data structure, the file name including the senders identification, a receiver identification and a date identification.

30 92. The product of claim 90 wherein the sender identification is stored as a business resource identifier

comprising a country code section, an entity code section and a market ID section.

93. The product of claim 90 wherein the receiver
5 identification is stored as a business resource identifier comprising a country code section, an entity code section and a market ID section.

94. The product of claim 91 where the date
10 identification includes a year field to denote the year the data structure was generated and a day filed to denote the day of the year the data structure was generated.

95. The product of claim 91 wherein the filename
15 further comprises a test/charge indicator that denotes if the data structure is a test file to test a billing system or a charge file that carries billing data.

96. The product of claim 91, wherein the filename
20 further comprises a type indicator that denotes if the billing data structure is an envelope or a message.

97. The product of claim 88, wherein the
identification information further comprises an
25 identification number element that includes a year indicator denoting the year the data structure was generated and a day indicator denoting the day of the year the date structure was generated.

98. The product of claim 88, wherein the
30 identification information further comprises a return field for indicating the reason an envelope is returned.

99. The product of claim 88, wherein the record further comprises a record heading section that provides information common to all the events in the record section.

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100. The product of claim 99, wherein the record heading section further comprises a total event attribute for listing the total number of events in the record section.

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101. The product of claim 99, wherein the record heading section further comprises a reserve field that can be customized.

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102. The product of claim 99, wherein the record heading section further comprises a record return detail element that provides information regarding data structure that rejected by a validation engine.

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103. The product of claim 88, wherein the record further comprises an end user section to identify a party who initiates an event or a party for whom the event was initiated.

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104. The product of claim 88, wherein the record further comprises one or more event information subsections that provide billing information regarding each event in the record section.

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105. The product of claim 104, wherein the event information section further comprises an event type attribute to denote the type of service used.

106. The product of claim 104, wherein the event information section further comprises a service information subsection.

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107. The product of claim 106, wherein the service information section further comprises a quality of service element that denotes the quality of services for the event.

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108. The product of claim 106, wherein the service information section further comprises an administrative element that contains information regarding the event usage.

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109. The product of claim 106, wherein the rate element is part of a rate detail section.

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110. The product of claim 109, wherein the rate detail section further comprises a numerator attribute for providing the currency amount per the chargeable unit stored in the rate element attribute.

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111. The product of claim 109, wherein the rate detail section further comprises a denominator attribute for providing the chargeable units as stored in the rate element attribute for a given rate.

112. A system for processing billing information comprising:

5 a first entity computer operable to generate a billing data structure having billing records comprising one or more billing events, each of the one or more billing events defined by a rate element attribute that denotes a chargeable unit;

10 a second entity computer coupled to the first entity computer, the second entity computer operable to access the billing information in the record and account for new charges as an accounts payable.

113. The method of claim 112 further comprising
15 generating invoices or reports regarding the accounts payables and accounts receivable.

114. The method of claim 113 further comprising
20 settling the accounts payable or receivable.

115. The method of claim 112 wherein the step of validating further comprising performing an audit check using an audit field of the billing data structure.

25 116. The method of claim 112 wherein the step of generating a billing data structure further comprises generating an envelope containing one or more billing records.

30 117. The method of claim 112 wherein the step of generating a billing data structure further comprises generating a message containing one billing record.